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10/594,716	09/29/2006	Masahiro Tsushima	107156-00349	2112

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EXAMINER	
NGUYEN, HAI V	

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No.	Applicant(s)	
	10/594,716	TSUSHIMA, MASAHIRO	
	Examiner	Art Unit	
	HAI V. NGUYEN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to ~~communication~~ application(s) filed on *29 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/29/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the application filed on 29 September 2006.

2. Claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 9 is rejected under 35 U.S.C. 101 because the claims 1, 14, 16 recite the element of "a computer program" which reads in light of specification amounts to nothing more than computer software void of a computer readable medium. See MPEP 2106(V)(B)(1).

5. Claim 9 fails to fall within a statutory category of invention. It is directed to the computer program itself, not a process occurring as a result of executing the computer program, a machine programmed to operate in accordance with the computer program nor a manufacture structurally and functionally interconnected with the computer program in a manner which enables the program to act as a computer component and realize its functionality, It's also clear not directed to a composition of matter. Therefore, it is non-statutory under 35 USC 101.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by **Strauss** et al. US patent # **4,476,582**.

8. As to claim 1, Strauss discloses substantially the invention as claimed, including a digital radio communication device *(Fig. 1)* comprising:

receiving means for receiving a radio wave *(Fig. 1, element 11)*;

position detecting means *(Fig. 1, element 21)*; and

control means *(Fig. 1, element 20)* for tuning the receiving means, wherein the control means is provided such that once a reception quality of the receiving means becomes deteriorated, the control means judges a receiving means reception quality deterioration area *(too far away)* in accordance with an output of the position detecting means, learns a tuning condition *(distance criterion)* for further improving the reception quality, and takes a learned tuning condition as a tuning condition for tuning the receiving means when next passing through said area *(Abstract, utilizing the station table with distance criterion to tune the broadcast station, col. 5, lines 44-61; col. 7, line 58 - col. 8, line 39)*.

9. As to claim 2, Strauss discloses, wherein the control means stores said tuning condition for tuning said receiving means as well as history information in relation to a reception quality of the receiving means *(Fig. 1, element 26)*, wherein once a reception

quality of the receiving means becomes deteriorated, and if a mobile body is passing through said judged area, the control means tunes said receiving means in accordance with said tuning condition, and compares a reception quality obtained by tuning the receiving means in accordance with said tuning condition, with a reception quality obtained when last passing through said area, in accordance with said history information, wherein once a reception quality becomes lower than a reception quality obtained during a last passing, the control means performs an operation to calculate a new tuning condition for further improving a reception quality of said receiving means, performs a learning by updating said tuning condition with said new tuning condition, and takes a tuning condition after the learning as a tuning condition for tuning said receiving means when next passing through said area *(col. 7, line 58 - col. 8, line 39)*.

10. As to claim 3, Strauss discloses, wherein the control means judges a reception quality of the receiving means in accordance with a bit error rate outputted from said receiving means *(the field strength comparator 30 finds a field strength in the receiving portion 28 which is greater than the field strength of the station tuned in the receiving portion 10 and being listened to through the loudspeaker 12, col. 8, lines 50-60)*.

11. As to claim 4, Strauss discloses, wherein the position detecting means is a GPS receiver *(Fig. 1, element 21 providing the location coordinates)*.

12. As to claim 5, Strauss discloses, therein the control means has a table *(Fig. 1, stores 15, 19)* for outputting a tuning condition with respect to said receiving means upon receiving internal operation state information and reception quality information of the receiving means, and takes an output from said table as a new tuning condition for

further improving the reception quality of said receiving means *(Fig. 1, col. 4, line 65 – col. 5, line 43; col. 7, line 58 – col. 8, line 39)*.

13. As to claim 6, Strauss discloses, wherein the control means has storage means for storing a tuning condition for tuning said receiving means, history information relating to the reception quality of the receiving means, and position information outputted from the position detecting means when the reception quality of the receiving means has become deteriorated *(Fig. 1, col. 4, line 65 – col. 5, line 43; col. 7, line 58 – col. 8, line 39)*.

14. As to claim 7, Strauss discloses, wherein the control means stores, in a server on a broadcasting station side, a tuning condition for tuning said receiving means and history information relating to a reception quality of the receiving means, and further stores position information outputted from the position detecting means when the reception quality of the receiving means has become deteriorated, wherein once a reception quality of the receiving means has become deteriorated, the control means operates to download said tuning condition, history information and position information stored in the server on said broadcasting station side *(Fig. 1, col. 9, lines 15-44)*.

15. Claim 8 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

16. Claim 9 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

17. Claim 10 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

18. Claim 11 has similar limitation of claim 3; therefore, it is rejected under the same rationale as in claim 3.

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claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by **Raghavachari US 2005/0070302 A1**.

21. As to claim 1, Raghavachari discloses substantially the invention as claimed, including a digital radio communication device *(Fig. 3)* comprising:

receiving means for receiving a radio wave *(Fig. 3, element 300)*;

position detecting means *(Fig. 3, element GPS 308)*; and

control means *(Fig. 3, the user through element of interface 316)* for tuning the receiving means, wherein the control means is provided such that once a reception quality of the receiving means becomes deteriorated, the control means judges a receiving means reception quality deterioration area in accordance with an output of the position detecting means, learns a tuning condition *(changing direction of antenna)* for further improving the reception quality, and takes a learned tuning condition as a tuning

condition for tuning the receiving means when next passing through said area *(Abstract, [0006], [0015], [0017], [0022])*.

22. As to claim 2, Raghavachari discloses, wherein the control means stores said tuning condition for tuning said receiving means as well as history information in relation to a reception quality of the receiving means *(Fig. 3, elements 312)*, wherein once a reception quality of the receiving means becomes deteriorated, and if a mobile body is passing through said judged area, the control means tunes said receiving means in accordance with said tuning condition, and compares *(maps)* a reception quality obtained by tuning the receiving means in accordance with said tuning condition, with a reception quality obtained when last passing through said area, in accordance with said history information *([0015])*, wherein once a reception quality becomes lower than a reception quality obtained during a last passing, the control means performs an operation to calculate a new tuning condition for further improving a reception quality of said receiving means, performs a learning by updating said tuning condition with said new tuning condition, and takes a tuning condition after the learning as a tuning condition for tuning said receiving means when next passing through said area *(Abstract, [0006], [0015], [0017], [0022])*.

23. As to claim 3, Raghavachari discloses, wherein the control means judges a reception quality of the receiving means in accordance with a bit error rate outputted from said receiving means *(Abstract, [0006], [0015], [0017], [0022])*.

24. As to claim 4, Raghavachari discloses, wherein the position detecting means is a GPS receiver *(Fig. 3, element GPS 308)*.

25. As to claim 5, Raghavachari discloses, therein the control means has a table *([0015])* for outputting a tuning condition with respect to said receiving means upon receiving internal operation state information and reception quality information of the receiving means, and takes an output from said table as a new tuning condition for further improving the reception quality of said receiving means *(Abstract, Fig. 2, [0006], [0015], [0017], [0022])*.

26. As to claim 6, Raghavachari discloses, wherein the control means has storage means *(Fig. 3, element 312, [0015]-[0017])* for storing a tuning condition for tuning said receiving means, history information relating to the reception quality of the receiving means, and position information outputted from the position detecting means when the reception quality of the receiving means has become deteriorated *(Abstract, Fig. 2, [0006], [0015], [0017], [0022])*.

27. As to claim 7, Raghavachari discloses, wherein the control means stores, in a server *(Fig. 4, element WLAP 104)* on a broadcasting station side, a tuning condition *(Fig. 4, elements 404, 406)* for tuning said receiving means and history information *(Fig. 4, element 408)* relating to a reception quality of the receiving means, and further stores position information outputted from the position detecting means when the reception quality of the receiving means has become deteriorated, wherein once a reception quality of the receiving means has become deteriorated, the control means operates to download said tuning condition, history information and position information stored in the server on said broadcasting station side *(Fig. 4, [0020]-[0023])*.

28. Claim 8 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

29. Claim 9 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

30. Claim 10 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

31. Claim 11 has similar limitation of claim 3; therefore, it is rejected under the same rationale as in claim 3 above.

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32. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by **Kawakami US 2005/0123083 A1**.

Claim Rejections - 35 USC § 103

33. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

34. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kawakami US 2005/0123083 A1** and further in view of **Raghavachari US 2005/0070302 A1.**

35. As to claim 1, Kawakami discloses a digital radio communication device *(Fig. 1)* comprising:

receiving means for receiving a radio wave *(Fig. , element 102)*.

However, Kawakami does not explicitly disclose position detecting means.

Raghavachari discloses the element GPS 308 in figure 3 for the purpose of determining location of the mobile (Fig. 3, [0017]).

Kawakami discloses control means *(Fig. 2, element 106)* for tuning the receiving means, wherein the control means is provided such that once a reception quality of the receiving means becomes deteriorated, the control means judges a receiving means reception quality deterioration area in accordance with an output *(Fig. 3, gray zone area, [0037], [0039])* of the position detecting means, learns a tuning condition *(changing or switching antennas)* for further improving the reception quality, and takes a learned tuning condition as a tuning condition for tuning the receiving means when next passing through said area *(Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])*.

36. As to claim 2, Kawakami-Raghavachari discloses, wherein the control means stores said tuning condition for tuning said receiving means *(Kawakami, Fig. 1, element 107, [0025])* as well as history information *(Raghavachari, Fig. 3, element 312, [0015])* in relation to a reception quality of the receiving means, wherein once a reception quality of the receiving means becomes deteriorated, and if a mobile body is passing through said judged area, the control means tunes said receiving means in accordance with said tuning condition, and compares a reception quality obtained by tuning the receiving means in accordance with said tuning condition, with a reception quality obtained when last passing through said area *(Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])*, in accordance with said history information, wherein once a reception quality becomes lower than a reception quality obtained during a last passing, the

control means performs an operation to calculate a new tuning condition for further improving a reception quality of said receiving means, performs a learning by updating said tuning condition with said new tuning condition, and takes a tuning condition after the learning as a tuning condition for tuning said receiving means when next passing through said area *(Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])*.

37. As to claim 3, Kawakami-Raghavachari discloses, wherein the control means judges a reception quality of the receiving means in accordance with a bit error rate outputted from said receiving means *(Kawakami, Abstract, element BER)*.

38. As to claim 4, Kawakami-Raghavachari discloses, wherein the position detecting means is a GPS receiver *(Raghavachari, Fig. 3, element GPS 308)*.

39. As to claim 5, Kawakami-Raghavachari discloses, therein the control means has a table *(Raghavachari, Fig. 3, element 312, [0015])* for outputting a tuning condition with respect to said receiving means upon receiving internal operation state information and reception quality information of the receiving means, and takes an output from said table as a new tuning condition for further improving the reception quality of said receiving means *(Raghavachari, Fig. 3, element 312, [0015]), (Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])*.

40. As to claim 6, Kawakami-Raghavachari discloses, wherein the control means has storage means *(Raghavachari, Fig. 3, element 312, [0015])* for storing a tuning condition for tuning said receiving means, history information relating to the reception quality of the receiving means, and position information outputted from the position

detecting means when the reception quality of the receiving means has become deteriorated *(Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])*.

41. As to claim 7, Kawakami-Raghavachari discloses, wherein the control means stores, in a server *(Raghavachari, Fig. 4, element WLAP 104)* on a broadcasting station side, a tuning condition *(Raghavachari, Fig. 4, elements 404, 406)* for tuning said receiving means and history information *(Fig. 4, element 408)* relating to a reception quality of the receiving means, and further stores position information outputted from the position detecting means when the reception quality of the receiving means has become deteriorated, wherein once a reception quality of the receiving means has become deteriorated, the control means operates to download said tuning condition, history information and position information stored in the server on said broadcasting station side *(Raghavachari, Fig. 4, [0020]-[0023]), (Kawakami, Fig. 3, [0024], [0037], [0039], [0042]-[0044])* .

42. Claim 8 corresponds to the method claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

43. Claim 9 corresponds to the computer readable medium claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

44. Claim 10 corresponds to the computer readable medium claim of claim 1; therefore, it is rejected under the same rationale as in claim 1 above.

45. Claim 11 has similar limitation of claim 3; therefore, it is rejected under the same rationale as in claim 3 above.

46. Further references of interest are cited on Form PTO-892, which is an attachment to this action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAI V. NGUYEN whose telephone number is (571)272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

Hai V. Nguyen
Examiner
Art Unit 2618